HENKEL KGAA *EP 873746-A2
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Use of aminovinyl aldehyde or ketone derivative optionally with dye precursors or direct dyes and oxidising agent - to dye keratinic fibres e.g. wool, pelts and human hair (Ger)

C98-167434 R(AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI)
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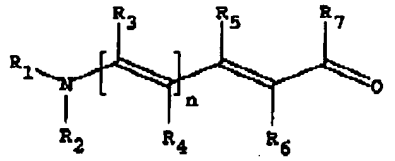
Use of at least one aminovinyl aldehyde or -ketone derivative of formula (I) or a carbonyl derivative as a colouring agent for dyeing keratinic fibres (preferably human hair) is new.



(I)

D(8-B6) E(10-A20B, 10-A23B, 10-B3A, 10-B4A2, 10-B4E) F(3-F2, 3-F20)

R_1, R_2 = H, 1-4 C alkyl, 1-4C hydroxyalkyl or optionally substituted phenyl; or
NR_1R_2 = heterocyclic ring;
R_3-R_7 = H, 1-4C alkyl or halo; and
n = 0-2;
provided that if n = 1 then R_5 and R_7 or R_4 and R_6 may complete a ring.

USE

(I) are used in hair dye compositions which additionally contain other dye precursors or direct dyes conventionally used in oxidation hair dye compositions (claimed).

(I) are used for dyeing keratinic fibres in the form of hair, wool and pelts (especially human hair).

ADVANTAGE

(I) are dermatologically harmless and do not induce skin sensitisation. In conjunction with oxidising agents they develop strong bright colours in the yellow region with good colour depth.

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fastness and covering power over grey.

PREFERRED COMPOUNDS

The ketone derivatives of (I) are e.g. imino derivatives, ketals or acetals with 1-4C alkanols.

(I) is selected from one of nineteen compounds e.g. 3-aminoacrolein, 3-dimethylaminoacrolein, 5-N-methylanilino-2,4-pentadienal, 6-dimethylamino-3,5-hexadiene-2-one, 7-dimethylamino-2,4,6-heptatrienal, 3-dimethylaminomethylene-1-formyl-1-cyclopentene and their salts. (I) is present at 0.03-65 (preferably 1-40) mmol/100 g of the dye composition. (I) may be used in conjunction with known dye precursors used in oxidation dye compositions and are selected from primary and secondary aliphatic or aromatic amines, N-containing heterocyclic compounds, aminoacids, oligopeptides with 2-9 aminoacids and aromatic hydroxy compounds and/or at least one CH-active compound. The dye precursors are selected from any of 185 primary and secondary amines, N-containing heterocyclic compounds, aromatic OH compounds and CH-active compounds e.g. N-(2-hydroxyethyl)-N-ethyl-phenylenediamine, 4-aminophenol, p-phenylenediamine, 2,5-diaminotoluene, 3,4-methylenedioxyaniline, 2,6-dihydroxy-3,4-dimethylpyridine and/or 5,6-dihydroxyindole and their salts.

The composition may also contain 0.01-20 wt. % of direct dyes selected from nitrophenylenediamines, nitroaminophenols, anthraquinones or indophenols. The dye composition when ready for use may contain 0.01-6 wt. % of an oxidising agent e.g. H_2O_2.

EXAMPLE

1-(2-Dimethylaminoethenyl)-5,5-dimethyl- cyclo-1-hexene-3-one (10 mmol), 2,6-dimethoxy-3,5-diaminopyridine dihydrochloride (10 mmol), Na acetate (10 mmol) and 1 drop of a 20 % fatty alkyl ether sulphate solution were mixed in 100 ml water, the slurry was heated to 80 °C for a short time, cooled and filtered.

The pH was adjusted to 6, then strands of grey hair were dyed in the dye solution for 30 minutes at 30 °C, rinsed and dried. The hair was dyed dark brown with very strong colour intensity. (RP)
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